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ZUKANOVICH, BRANDY A

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte QIAN ZHONG, RAMAKRISHNAN NATARAJAN,
PARASHURAM KULKARNI,
ABDELHALIM ABBAS, and ZHIGANG HUA

Appeal 2015-000927¹
Application 13/015,362²
Technology Center 3600

Before BIBHU R. MOHANY, JAMES A. WORTH, and
BRADLEY B. BAYAT, *Administrative Patent Judges*.

WORTH, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Non-Final rejection of claims 1–30. We have jurisdiction under 35 U.S.C. §§ 134 and 6(b).

We AFFIRM.

¹ Our decision refers to the Appellant's Appeal Brief ("Appeal Br.," filed July 31, 2014) and Reply Brief ("Reply Br.," filed Oct. 20, 2014), and the Examiner's Non-Final Office Action ("Non-Final Act.," mailed Apr. 11, 2014) and Answer ("Ans.," mailed Aug. 22, 2014).

² According to Appellants, eBay Inc., is the real party in interest. (Appeal Br. 2).

Introduction

Appellants' application relates to "a method and system for identifying users using reputational data." (Spec. ¶ 1).

Claims 1, 11, and 21 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the subject matter on appeal:

1. A system, comprising:
 - a processor comprising:
 - a processor-implemented transaction data collector module configured to collect transaction data of users of a network-based community;
 - a processor-implemented weight module configured to compute a weight corresponding to a transaction relationship between two users, the weight based on transactions between the two users;
 - a processor-implemented metric module configured to compute a first metric including a hub value of a user, and a second metric including an authority value for the user, the first metric mutually dependent on the second metric, the hub value of the user based on corresponding authority values of other users whom the user has purchased from, the authority value of the user based on the corresponding hub values of other users which the user has sold to; and
 - a processor-implemented reputation module configured to determine a reputation for the user based on at least one of the corresponding weight of transaction relationships with other users, the first metric, and the second metric, the reputation for the user as a buyer being a function of at least the first metric of the user, the reputation for the user as a seller being a function of at least the second metric of the user.

(Appeal Br. 27, Claims App.)

Rejections on Appeal

The Examiner maintains, and Appellants appeal, the following rejections:

- I. Claims 1–30 stand rejected under 35 U.S.C. § 101 as being directed to an abstract idea.³
- II. Claims 1–30 stand rejected under 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement.
- III. Claims 1–30 stand rejected under 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

ANALYSIS

Rejection I (Patentable Subject Matter)

Claims 1–30

The Examiner finds that claims 1–10 are to a machine; claims 11–20 are directed to a process; and claims 21–30 are directed to an article of manufacture (Ans. 7). Nevertheless, the Examiner determines that claims 1–30 are additionally directed to the abstract idea of determining a reputation of buyers and sellers (*id.*). The Examiner identifies the individual recitations as follows: collecting transaction data; computing a weight corresponding to a transaction relationship between two users; computing a first and second metric; and determining by a processor a reputation for a user based on the

³ This rejection was set forth in the Answer pursuant for the procedures for a new ground of rejection in an Answer.

corresponding weight of the transaction, the first metric, and the second metric (*id.*). The Examiner further determines that the recitations of claims 1–30, when taken alone, each execute (a function) in a routine and conventional manner, and when taken in combination, achieve coordinated execution of generic computer functionalities which are well-understood, routine and conventional activities previously known to the industry (*id.* at 7–8).

We are unpersuaded by Appellants’ argument that the claims at issue are not directed to an abstract idea, nor a mathematical formula, nor a fundamental economic practice (*see* Reply Br. 3–8). Appellants, relying on the claim language itself, argue that claim 1 is directed to a module that

is configured to compute a first metric including a hub value of a user [in a network-based community], and a second metric including an authority value for the user, the first metric mutually dependent on the second metric, the hub value of the user based on corresponding authority values of other users whom the user has purchased from, the authority value of the user based on the corresponding hub values of other users which the user has sold to

(Reply Br. 5). Appellants assert that this module “performs a recursive process of calculating hub and authority values for a user” (*id.*). Appellants further point to the Specification, which states, *inter alia*, that “[u]nlike the traditional ranking system, the current system is derived from a dynamic user transaction graph, which captures the dynamics of the interactions between sellers and buyers” (Spec ¶ 21). In sum, Appellants do not contest the Examiner’s characterization of “reputation” as an abstract idea other than to point to mathematical relationships. Thus, Appellants essentially agree that a mathematical operation is being performed. We conclude that

Appellants reliance on a mathematical operation, is non-patentable subject matter under *Alice*. See *Alice Corp., Pty. Ltd. v CLS Bank Intl*, 134 S.Ct. 2347, 2355 (2014). (discussing *Parker v. Flook*, 437 U.S. 584, 594–595 (1978)).

Appellants further argue that the Examiner “misclassifies” and “oversimplified” the claims (in looking at the individual recitations) (Reply Br. 5–8). Appellants assert that, even if the claims contain an abstract idea, they do not simply “apply it,” nor solve a problem with “conventional industry practice,” nor pre-empt scientific work (Reply Br. 9–11). However, we conclude that the claims are directed to a mathematical operation that remains within the realm of the abstract, even considering the individual recitations. Nor have Appellants persuasively demonstrated a technological innovation other than a proposed mathematical operation. Accordingly, we sustain the Examiner’s rejection under § 101 of claims 1–30.

Rejection II (Written Description)

Claims 1–30

The Examiner determines that a review of the disclosure does not reveal the manner in which the reputation value is ultimately determined (i.e. calculated), as recited in claim 1, i.e., “a reputation for the user based on at least one of the corresponding weight of transaction relationships with other users, the first metric, and the second metric, the reputation for the user as a buyer being a function of at least the first metric of the user, the reputation for the user as a seller being a function of at least the second metric of the user” (Non-Final Act. 3). The Examiner emphasizes that this is not an

enablement rejection but rather goes to the written description requirement (*id.*). The Examiner rejects the remaining claims for similar reasons.

Appellants rely on a “strong presumption” in favor of finding written description support and also point to paragraph 49 of the Specification, which recites: “Back to FIG. 2B, the reputation module 214 computes a reputation value for a user based on at least one of the corresponding weight of transaction relationships with other users, the hub value, and the authority value” (Appeal Br. 16 (citing MPEP 2163(I)(A); Spec. ¶ 49)). Appellants also argue that “[t]he specific algorithm used to determine the reputation is not a critical essential or critical feature of the invention” and that “Appellants do not believe that it is necessary for such specificity to be provided” (Appeal Br. 16–17). Appellants further state that the Specification describes that the first metric may be used alone and that the second metric may be used alone, and therefore the Specification discloses two algorithms (*id.* at 17). However, we are not persuaded by Appellants’ argument that the Specification describes that one of the values may be used alone. To the extent that Appellants are relying on paragraph 49 of the Specification, the Specification describes that the reputation value may be “based on” at least one value, but does not explain what the algorithm is for “bas[ing]” the reputation value on such a value.

Appellants further argue that the Examiner has erred in conducting the written description analysis and that the Examiner has erred in claim construction because a proper understanding of the claim would show the applicant to have been in possession of the invention (Appeal Br. 20–21). Appellants then point to paragraphs 37–49 and Figures 3A, 3B, and 3C for what Appellants believe to describe “specific algorithms” as to how a first

metric and a second metric can be computed, including a “Hyperlink-Induced Topic Search (HITS) algorithm” (Appeal Br. 21–25). However, although the Specification discloses that HITS algorithm is used to compute hub and authority values (*see* Spec. paragraph 43), and the Specification discloses that an edge weight can represent the number or amount of total transactions (*id.*), the Specification does not describe how to compute a reputation “based thereon.” As such, we agree with the Examiner that the calculation is not disclosed or described in the Specification. Therefore, we sustain the Examiner’s rejection under § 112, first paragraph, of claims 1–30.

Rejection III (Indefiniteness)

Claims 1–30

The Examiner determines that

The metes and bounds of this claim is unclear inasmuch as one of ordinary skill in the art cannot determine how to avoid infringement of this claim because they are not apprised of what is to be determined as a “reputation.” The [S]pecification does not disclose any meaningful structure/algorithm explaining how one would generate a reputation value rendering it unclear to how this is accomplished and what are the metes and bounds of the claim

(Non-Final Act. 5–6). Appellants argue that the individual claim terms used in the calculation (of reputation) are clear (e.g., “first metric”), that the reputation can be based on a single variable, and that breadth is not to be confused with indefiniteness, and that the Examiner is suggesting an inappropriate narrowing of claim scope (Appeal Br. 10–15). However, for the above reasons, we agree with the Examiner that it is unclear what a “reputation” is. The claim explains that “reputation” is “based on” variables

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without providing the exact calculation. Nor does the Specification clarify what the calculation is.

We, therefore, sustain the Examiner's rejection under § 112, second paragraph, of claims 1–30.

DECISION

The Examiner's decision to reject claims 1–30 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED